T-038

P.003

Appl. No. 10/667,187 Amendment dated August 10, 2006 Reply to Office Action mailed 5/10/06 RECEIVED CENTRAL FAX CENTER AUG 1 0 2006

Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A compound of formula (Ia) or (Ib):

or a pharmaceutically acceptable salt, hydrate, tautomer or solvate thereof, wherein:

X is O or S;

R¹ is selected from the group consisting of

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F-623

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where R^{2a} is independently selected from the group consisting of: (C₁-C₆)alkyl, (C_2-C_6) alkenyl, (C_2-C_6) alkynyl, (C_3-C_{10}) cycloalkyl, (C_5-C_{10}) aryl, (C_1-C_6) alkylaryl, amino, carbonyl, carboxyl, $(C_2 - C_6)$ acid, $(C_1 - C_6)$ ester, $(C_5 - C_{10})$ heteroaryl, (C₅-C₁₀)heterocyclyl, (C₁-C₆)alkoxy, nitro, halo, hydroxyl, (C₁-C₆)alkoxy(C₁-C₆)ester, and where alkyl, alkenyl, alkynyl, cycloalkyl, aryl, amino, (C₂-C₆) acid, (C₁-C₆) ester, heteroaryl, heterocyclyl, and alkoxy of R^{2a} is optionally substituted by at least one moiety independently selected from the group consisting of halo, (C₁-C₆)alkyl, (C₂-C₆)alkenyl, (C₂-C₆)alkynyl, perhalo(C₁-C₆)alkyl, phenyl, (C₃-C₁₀)cycloalkyl, (C₅-C₁₀)heteroaryl, (C₅-C₁₀)heterocyclic, formyl, NC-, (C1-C6)alkyl-(C=O)-, phenyl-(C=O)-, HO-(C=O)-, (C1-C6)alkyl-O-(C=O)-, (C1-C6)-, (C1-C6)-, (C1-C6)-, (C₆)alkyl-NH-(C=O)-, $((C_1-C_6)alkyl)_2$ -N-(C=O)-, phenyl-NH-(C=O)-, phenyl-[((C₁-C₆)alkyl)-N]- C_6)alkyl-(C=O)-[((C_1 - C_6)alkyl)-N]-, phenyl-(C=O)-NH-, phenyl-(C=O)-[((C_1 - C_6)alkyl)-N]-, $H_2N_-(C=O)-NH_-$, $(C_1-C_6)alkyl-HN_-(C=O)-NH_-$, $((C_1-C_6)alkyl)_2N_-(C=O)-NH_-$, $(C_1-C_6)alkyl)_2N_-(C=O)-NH_-$, $(C_1-C_6)alkyl)_2N_-(C=O)-NH_ C_6$)alkyl-HN-(C=O)-[((C_1 - C_6)alkyl)-N]-, ((C_1 - C_6)alkyl)₂N-(C=O)-[(C_1 - C_6)alkyl-N]-, phenyl-HN-(C=O)-NH-, (phenyl)₂N-(C=O)-NH-, phenyl-HN-(C=O)-[((C_1 - C_6)alkyl)-N]-, $(phenyl-)_2N-(C=O)-[((C_1-C_6)alkyl)-N]-, (C_1-C_6)alkyl-O-(C=O)-NH-,$ (C_1-C_6) alkyl-O- $(C=O)-[((C_1-C_6)$ alkyl)-N]-, phenyl-O-(C=O)-NH-, phenyl-O-(C=O)-[(alkyl)-N]-, (C1-C6)alkyl-SO2NH-, phenyl-SO2NH-, (C1-C6)alkyl-SO2-, phenyl-SO₂-, hydroxy, (C_1-C_6) alkoxy, perhalo (C_1-C_6) alkoxy, phenoxy, (C_1-C_6) alkyl-(C=O)-O-, (C_1-C_6) ester- (C_1-C_6) alkyl-O-, phenyl-(C=O)-O-, $H_2N-(C=O)$ -O-, (C_1-C_6) alkyl-HN-(C=O)-O-, $((C_1-C_6)alkyl)_2N-(C=O)-O-$, phenyl-HN-(C=O)-O-, and (phenyl)_2N-(C=O)-O-;

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From-

wherein R¹ can optionally be further independently substituted with at least one moiety independently selected from the group consisting of: carbonyl, halo, halo(C1-C6)alkyl, perhalo(C₁-C₆)alkyl, perhalo(C₁-C₆)alkoxy, (C₁-C₆)alkyl, (C₂-C₆)alkenyl, (C₂-C₆)alkynyl, hydroxy, oxo, mercapto, (C₁-C₆)alkylthio, (C₁-C₆)alkoxy, (C₅-C₁₀)aryl or (C₅-C₁₀)heteroaryl, (C₅- C_{10})aryloxy or (C_5-C_{10}) heteroaryloxy, (C_5-C_{10}) ar (C_1-C_6) alkyl or (C_5-C_{10}) heteroar (C_1-C_6) alkyl, (C_5-C_{10}) C_{10})ar(C_1 - C_6)alkoxy or (C_5 - C_{10})heteroar(C_1 - C_6)alkoxy, HO-(C=O)-, ester, amido, ether, amino, amino(C₁-C₆)alkyl, (C₁-C₆)alkylamino(C₁-C₆)alkyl, di(C₁-C₆)alkylamino(C₁-C₆)alkyl, (C₅- C_{10})heterocyclyl(C_1 - C_6)alkyl, (C_1 - C_6)alkyl- and di(C_1 - C_6)alkylamino, cyano, nitro, carbamoyl, (C_1-C_6) alkylcarbonyl, (C_1-C_6) alkoxycarbonyl, (C_1-C_6) alkylaminocarbonyl, di(C₁-C₆)alkylaminocarbonyl, (C₅-C₁₀)arylcarbonyl, (C₅-C₁₀)aryloxycarbonyl, (C_1-C_6) alkylsulfonyl, and (C_5-C_{10}) arylsulfonyl;

each R³ is independently selected from the group consisting of: hydrogen, halo, halo(C₁-C₆)alkyl, (C₁-C₆)alkyl, (C₂-C₆)alkenyl, (C₂-C₆)alkynyl, perhalo(C₁-C₆)alkyl, phenyl, (C₅-C₁₀)heteroaryl, (C₅-C₁₀)heterocyclic, (C₃-C₁₀)cycloalkyl, hydroxy, (C₁-C₆)alkoxy, perhalo(C₁-C₆)alkoxy, phenoxy, (C₅-C₁₀)heteroaryl-O-, (C₅-C₁₀)heterocyclic-O-, (C₃-C₁₀)cycloalkyl-O-, (C₁-C₆)alkyl-S-, (C₁-C₆)alkyl-SO₂-, (C₁-C₆)alkyl-NH-SO₂-, O₂N-, NC-, amino, Ph(CH₂)₁₋₆HN-, (C₁- C_6)alkyl HN-, (C_1 - C_6)alkylamino, [(C_1 - C_6)alkyl]₂-amino, (C_1 - C_6)alkyl-SO₂-NH-, amino(C=O)-, $aminoO_2S-$, $(C_1-C_6)alkyl-(C=O)-NH-$, $(C_1-C_6)alkyl-(C=O)-[(((C_1-C_6)alkyl)-N]-$, phenyl-(C=O)-NH-, phenyl-(C=O)-[((C₁-C₆)alkyl)-N]-, (C₁-C₆)alkyl-(C=O)-, phenyl-(C=O)-, (C₅- C_{10})heteroaryl-(C=O)-, (C₅-C₁₀)heterocyclic-(C=O)-, (C₃-C₁₀)cycloalkyl-(C=O)-, HO-(C=O)-, $(C_1-C_6)alkyl-O-(C=O)-$, $H_2N(C=O)-$, $(C_1-C_6)alkyl-NH-(C=O)-$, $[(C_1-C_6)alkyl]_2-N-(C=O)-$, phenyl-NH-(C=O)-, phenyl- $[((C_1-C_6)alkyl)-N]-(C=O)-, (C_5-C_{10})heteroaryl-NH-(C=O)-, (C_5-C_{10})hetero$ C₁₀)heterocyclic-NH-(C=O)-, (C₃-C₁₀)cycloalkyl-NH-(C=O)- and (C₁-C₆)alkyl-(C=O)-O-7:

where alkyl, alkenyl, alkynyl, phenyl, heteroaryl, heterocyclic, cycloalkyl, alkoxy, phenoxy, amino of R³ is optionally substituted by at least one substituent independently selected from (C₁-C₆)alkyl, (C₁-C₆)alkoxy, halo(C₁-C₆)alkyl, halo, H₂N-, Ph(CH₂)₁₋₆HN-, and (C₁-C₆)alkylHN-;

s is an integer from one to five;

From-

 R^4 is independently selected from the group consisting of: hydrogen, halo, halo(C_1 - C_6)alkyl, (C_1 - C_6)alkyl, (C_2 - C_6)alkenyl, (C_2 - C_6)alkynyl, perhalo(C_1 - C_6)alkyl, phenyl, (C_5 - C_{10})heteroaryl, (C_5 - C_{10})heteroaryl-O-, (C_5 - C_{10})heteroaryl-O-, (C_5 - C_{10})heteroaryl-O-, (C_5 - C_{10})heterocyclic-O-, (C_3 - C_{10})cycloalkyl-O-, (C_1 - C_6)alkyl-S-, (C_1 - C_6)alkyl-SO₂-, (C_1 - C_6)alkyl-NH-SO₂-, O₂N-, NC-, amino, Ph(CH₂)₁₋₆HN-, (C_1 - C_6)alkylHN-, (C_1 - C_6)alkylamino, [(C_1 - C_6)alkyl]₂-amino, (C_1 - C_6)alkyl-SO₂-NH-, amino(C=O)-, aminoO₂S-, (C_1 - C_6)alkyl-(C=O)-NH-, (C_1 - C_6)alkyl-O)-, (C_1 - C_6)alkyl-N]-, (C_1 - C_6)alkyl-O)-, (C_1 - C_6)alkyl-N]-, (C_1 - C_6)alkyl-O)-, (C_5 - C_{10})heterocyclic-(C=O)-, (C_3 - C_{10})cycloalkyl-(C=O)-, HO-(C=O)-, (C_1 - C_6)alkyl-O-(C=O)-, (C_1 - C_6)alkyl-NH-(C=O)-, (C_1 - C_6)alkyl-NH-(C=O)-, (C_3 - C_{10})heterocyclic-NH-(C=O)-, (C_3 - C_{10})cycloalkyl-NH-(C=O)-, (C_5 - C_{10})heterocyclic-NH-(C=O)-, (C_3 - C_{10})cycloalkyl-NH-(C=O)-, (C_5 - C_{10})heterocyclic-NH-(C=O)-, (C_3 - C_1 0)cycloalkyl-NH-(C=O)-, (C_5 - C_1 0)heterocyclic-NH-(C=O)-, (C_3 - C_1 0)cycloalkyl-NH-(C=O)- and (C_1 - C_6)alkyl-(C=O)-O- τ

where alkyl, alkenyl, alkynyl, phenyl, heteroaryl, heterocyclic, cycloalkyl, alkoxy, phenoxy, amino of R^4 is optionally substituted by at least one substituent independently selected from the group consisting of (C_1-C_6) alkyl, (C_1-C_6) alkoxy, halo (C_1-C_6) alkyl, halo, H_2N_- , $Ph(CH_2)_{1-6}HN_-$, (C_1-C_6) alkyl HN_- , (C_5-C_{10}) heteroaryl and (C_5-C_{10}) heterocyclyl;

with the proviso that when R⁴ is a substituted phenyl moiety, then (a) R¹ is not naphthyl, phenyl or anthracenyl and (b) if R¹ is a phenyl fused with an aromatic or non-aromatic cyclic ring of 5-7 members wherein said cyclic ring optionally contains up to three heteroatoms independently selected from N, O and S, then the fused cyclic ring of said R¹ moiety is substituted;

with the proviso that when R^4 is NH_2 and X is S, then R^1 is not an amino-substituted pyridyl or pyrimidinyl moiety; : and

with the provisio that whon in formula (Ia) R⁴ is NH₂ and X is S, then R¹ is not a pyridyl, pyrimidinyl, a naphthyridinyl moiety, or a quinoline moiety that is bonded to the thiazel moiety through the phenyl ring; and

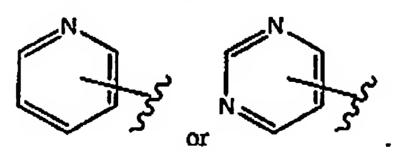
with the <u>proviso</u> previsio that when in formula (Ia) R^4 is CH_3 and X is S, R^1 is not a 3,4-dimethoxy substituted phenyl moiety.

From-

2. (original) A compound of claim 1, wherein R¹ is

3. (original) A compound of claim 1, wherein R¹ is

4. (original) A compound of claim 1, wherein R¹ is



From-

5. (original) A compound of claim 1, wherein R¹ is

6. (original) A compound of claim 1, wherein R¹ is

7. (original) A compound of claim 1, wherein R¹ is

From-

8. (original) A compound of claim 1, wherein R¹ is

- 9. (withdrawn) A compound of claim 1, wherein X is O; s is one to two; R^3 is hydrogen or (C_1-C_6) alkyl; and R^4 is H, (C_1-C_6) alkyl, or amino.
- 10. (original) A compound of claim 1, wherein X is S; s is one to two; \mathbb{R}^3 is hydrogen or (C₁-C₆)alkyl; and \mathbb{R}^4 is H, (C₁-C₆)alkyl, or amino.
- 11. (previously presented) A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 1 and a pharmaceutically acceptable carrier.
- 12. (cancelled)
- 13. (cancelled)
- 14. (withdrawn) A compound selected from the groups consisting of
 - 2-(5-Benzo[1,3]dioxol-5-yl-oxazol-4-yl)-6-methyl-pyridine;
 - 2-(5-Benzo[1,3]dioxol-5-yl-oxazol-4-yl)-pyridine;
 - 2-(5-Benzo[1,3]dioxol-5-yl-oxazol-4-yl)-6-methoxy-pyridine;
 - 2-(5-Benzo[1,3]dioxol-5-yl-oxazol-4-yl)-6-trifluoromethyl-pyridine;
 - 2-Methyl-5-[4-(6-methyl-pyridin-2-yl)-oxazol-5-yl]-2H-benzotriazole;
 - 4-[4-(6-Methyl-pyridin-2-yl)-oxazol-5-yl]-quinoline;
 - 1-Methyl-6-[4-(6-methyl-pyridin-2-yl)-oxazol-5-yl]-1H-benzotriazole;

- 6-(4-Pyridin-2-yl-oxazol-5-yl)-quinoxaline;
- 6-[4-(6-Methyl-pyridin-2-yl)-oxazol-5-yl]-quinoxaline;
- 6-[4-(6-Methyl-pyridin-2-yl)-oxazol-5-yl]-quinoline;
- 6-(4-pyridin-2-yl-oxazol-5-yl)-quinoline;
- 2-(5-Benzo[1,3]dioxol-5-yl-oxazol-4-yl)-6-ethyl-pyridine;
- 2-(5-Benzo[1,3]dioxol-5-yl-oxazol-4-yl)-6-propyl-pyridine;
- 6-[4-(6-Methyl-pyridin-2-yl)-oxazol-5-yl]-benzothiazole;
- 2-(4-Benzo[1,3]dioxol-5-yl-oxazol-5-yl)-6-methyl-pyridine;
- 4-[5-(6-Methyl-pyridin-2-yl)-oxazol-4-yl]-quinoline;
- 1-Methyl-6-[5-(6-methyl-pyridin-2-yl)-oxazol-4-yl]-1H-benzotriazole;
- 2-Methyl-5-[5-(6-methyl-pyridin-2-yl)-oxazol-4-yl]-2H-benzotriazole;
- 6-[5-(6-Methyl-pyridin-2-yl)-oxazol-4-yl]-quinoline;
- 6-[5-(6-Methyl-pyridin-2-yl)-oxazol-4-yl]-quinoxaline;
- 2-[5-(6-Methyl-pyridin-2-yl)-oxazol-4-yl]-[1,5]naphthyridine;
- {4-[5-(6-Methyl-pyridin-2-yl)-oxazol-4-yl]-pyridin-2-yl}-phenyl-amine;
- 2-(4-Benzo[1,3]dioxol-5-yl-2-methyl-oxazol-5-yl)-6-methyl-pyridine;
- 1-Methyl-6-[2-methyl-5-(6-methyl-pyridin-2-yl)-oxazol-4-yl]-1H-benzotriazole;
- 2-Methyl-5-[2-methyl-5-(6-methyl-pyridin-2-yl)-oxazol-4-yl]-2H-benzotriazole;
- 6-[2-Methyl-5-(6-methyl-pyridin-2-yl)-oxazol-4-yl]-quinoline;
- 6-[2-Methyl-5-(6-methyl-pyridin-2-yl)-oxazol-4-yl]-quinoxaline;
- 2-[2-Methyl-5-(6-methyl-pyridin-2-yl)-oxazol-4-yl]-[1,5]naphthyridine;
- {4-[2-Methyl-5-(6-methyl-pyridin-2-yl)-oxazol-4-yl]-pyridin-2-yl}-phenyl-amine;
- 4-[2-Methyl-5-(6-methyl-pyridin-2-yl)-oxazol-4-yl]-quinoline;
- 4-Benzo[1,3]dioxol-5-yl-5-(6-methyl-pyridin-2-yl)-thiazol-2-ylamine;
- 4-(3-Methyl-3H-benzotriazol-5-yl)-5-(6-methyl-pyridin-2-yl)-thiazol-2-ylamine;
- 4-(2-Methyl-2H-benzotriazol-5-yl)-5-(6-methyl-pyridin-2-yl)-thiazol-2-ylamine;
- 5-(6-Methyl-pyridin-2-yl)-4-quinolin-6-yl-thiazol-2-ylamine;
- 5-(6-Methyl-pyridin-2-yl)-4-quinoxalin-6-yl-thiazol-2-ylamine;
- 5-(6-Methyl-pyridin-2-yl)-4-[1,5]naphthyridin-2-yl-thiazol-2-ylamine;

- {4-[2-Amino-5-(6-methyl-pyridin-2-yl)-thiazol-4-yl]-pyridin-2-yl}-phenyl-amine;
- 5-(6-Methyl-pyridin-2-yl)-4-quinolin-4-yl-thiazol-2-ylamine;
- 4-(6-Methyl-pyridin-2-yl)-5-quinolin-6-yl-thiazol-2-ylamine;
- 5-(3-Methyl-3H-benzotriazol-5-yl)-4-(6-methyl-pyridin-2-yl)-thiazol-2-ylamine;
- 5-(2-Methyl-2H-benzotriazol-5-yl)-4-(6-methyl-pyridin-2-yl)-thiazol-2-ylamine;
- 5-Benzo[1,3]dioxol-5-yl-4-(6-methyl-pyridin-2-yl)-thiazol-2-ylamine;
- 4-(6-Methyl-pyridin-2-yl)-5-quinoxalin-6-yl-thiazol-2-ylamine;
- 4-(6-Methyl-pyridin-2-yl)-5-[1,5]naphthyridin-2-yl-thiazol-2-ylamine;
- {4-[2-Amino-4-(6-methyl-pyridin-2-yl)-thiazol-5-yl]-pyridin-2-yl}-phenyl-amine;
- 4-(6-Methyl-pyridin-2-yl)-5-quinolin-4-yl-thiazol-2-ylamine;
- 6-[2-Methyl-4-(6-methyl-pyridin-2-yl)-oxazol-5-yl]-quinoline;
- 1-Methyl-6-[2-methyl-4-(6-methyl-pyridin-2-yl)-oxazol-5-yl]-1H-benzotriazole;
- 2-Methyl-5-[2-methyl-4-(6-methyl-pyridin-2-yl)-oxazol-5-yl]-2H-benzotriazole;
- 2-(5-Benzo[1,3]dioxol-5-yl-2-methyl-oxazol-4-yl)-6-methyl-pyridine;
- 6-[2-Methyl-4-(6-methyl-pyridin-2-yl)-oxazol-5-yl]-quinoxaline;
- 2-[2-Methyl-4-(6-methyl-pyridin-2-yl)-oxazol-5-yl]-[1,5]naphthyridine;
- {4-[2-Methyl-4-(6-methyl-pyridin-2-yl)-oxazol-5-yl]-pyridin-2-yl}-phenyl-amine;
- 4-[2-Methyl-4-(6-methyl-pyridin-2-yl)-oxazol-5-yl]-quinoline;
- 1-Methyl-6-[4-(6-methyl-pyridin-2-yl)-thiazol-5-yl]-1H-benzotriazole;
- 2-Methyl-5-[4-(6-methyl-pyridin-2-yl)-thiazol-5-yl]-2H-benzotriazole;
- 2-(5-Benzo[1,3]dioxol-5-yl-thiazol-4-yl)-6-methyl-pyridine;
- 6-[4-(6-Methyl-pyridin-2-yl)-thiazol-5-yl]-quinoxaline;
- 2-[4-(6-Methyl-pyridin-2-yl)-thiazol-5-yl]-[1,5]naphthyridine;
- {4-[4-(6-Methyl-pyridin-2-yl)-thiazol-5-yl]-pyridin-2-yl}-phenyl-amine;
- 4-[4-(6-Methyl-pyridin-2-yl)-thiazol-5-yl]-quinoline;
- 6-[4-(6-Methyl-pyridin-2-yl)-thiazol-5-yl]-quinoline;
- 1-Methyl-6-[5-(6-methyl-pyridin-2-yl)-thiazol-4-yl]-1H-benzotriazole;
- 2-Methyl-5-[5-(6-methyl-pyridin-2-yl)-thiazol-4-yl]-2H-benzotriazole;
- 2-(4-Benzo[1,3]dioxol-5-yl-thiazol-5-yl)-6-methyl-pyridine;

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6-[5-(6-Methyl-pyridin-2-yl)-thiazol-4-yl]-quinoxaline;
2-[5-(6-Methyl-pyridin-2-yl)-thiazol-4-yl]-[1,5]naphthyridine;
{4-[5-(6-Methyl-pyridin-2-yl)-thiazol-4-yl]-pyridin-2-yl}-phenyl-amine;
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- 4-[5-(6-Methyl-pyridin-2-yl)-thiazo!-4-yl]-quinoline;
- 6-[5-(6-Methyl-pyridin-2-yl)-thiazol-4-yl]-quinoline;
- 1-Methyl-6-[2-methyl-4-(6-methyl-pyridin-2-yl)-thiazol-5-yl]-1H-benzotriazole;
- 2-Methyl-5-[2-methyl-4-(6-methyl-pyridin-2-yl)-thiazol-5-yl]-2H-benzotriazole:
- 2-(5-Benzo[1,3]dioxol-5-yl-2-methyl-thiazol-4-yl)-6-methyl-pyridine;
- 6-[2-methyl-4-(6-Methyl-pyridin-2-yl)-thiazol-5-yl]-quinoxaline;
- 2-[2-methyl-4-(6-Methyl-pyridin-2-yl)-thiazol-5-yl]-[1,5]naphthyridine;
- {4-[2-methyl-4-(6-Methyl-pyridin-2-yl)-thiazol-5-yl]-pyridin-2-yl}-phenyl-amine;
- 4-[2-methyl-4-(6-Methyl-pyridin-2-yl)-thiazol-5-yl]-quinoline;
- 6-[2-methyl-4-(6-Methyl-pyridin-2-yl)-thiazol-5-yl]-quinoline;
- 1-Methyl-6-[2-methyl-5-(6-methyl-pyridin-2-yl)-thiazol-4-yl]-1H-benzotriazole;
- 2-Methyl-5-[2-methyl-5-(6-methyl-pyridin-2-yl)-thiazol-4-yl]-2H-benzotriazole;
- 2-(4-Benzo[1,3]dioxol-5-yl-2-methyl-thiazol-5-yl)-6-methyl-pyridine;
- 6-[2-methyl-5-(6-Methyl-pyridin-2-yl)-thiazol-4-yl]-quinoxaline;
- 2-[2-methyl-5-(6-Methyl-pyridin-2-yl)-thiazol-4-yl]-[1,5]naphthyridine;
- {4-[2-methyl-5-(6-Methyl-pyridin-2-yl)-thiazol-4-yl]-pyridin-2-yl}-phenyl-amine;
- 4-[2-methyl-5-(6-Methyl-pyridin-2-yl)-thiazol-4-yl]-quinoline; and
- 6-[2-methyl-5-(6-Methyl-pyridin-2-yl)-thiazol-4-yl]-quinoline; or a pharmaceutically acceptable salt thereof.
- 15. (withdrawn) A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 14 and a pharmaceutically acceptable carrier.

From-

16. (new) A compound of formula (Ib):

$$R^{1}$$
 R^{4}
 (Ib)

or a pharmaceutically acceptable salt, hydrate, tautomer or solvate thereof, wherein:

X is O;

R¹ is selected from the group consisting of

From-

where \mathbb{R}^{2n} is independently selected from the group consisting of: (C_1-C_6) alkyl, (C_2-C_6) alkenyl, (C_2-C_6) alkynyl, (C_3-C_{10}) cycloalkyl, (C_5-C_{10}) aryl, (C_1-C_6) alkylaryl, amino, carbonyl, carboxyl, (C_5-C_{10}) heteroaryl, (C_5-C_{10}) heterocyclyl, (C_1-C_6) alkoxy, nitro, halo, hydroxyl, (C_1-C_6) alkoxy (C_1-C_6) ester, and where alkyl, alkenyl, alkynyl, cycloalkyl, aryl, amino, heteroaryl, heterocyclyl, and alkoxy of \mathbb{R}^{2n} is optionally substituted by at least one moiety independently selected from the group consisting of halo, (C_1-C_6) alkyl, (C_2-C_6) alkenyl, (C_2-C_6) alkynyl, perhalo (C_1-C_6) alkyl, phenyl, (C_3-C_{10}) cycloalkyl, (C_3-C_{10}) heteroaryl, (C_5-C_{10}) heterocyclic, formyl, NC-, (C_1-C_6) alkyl-(C=O)-, phenyl-(C=O)-, HO-(C=O)-, (C_1-C_6) alkyl-O-(C=O)-, (C_1-C_6) alkyl-NH-(C=O)-, $((C_1-C_6)$ alkyl)-NI-(C=O)-, phenyl- $((C_1-C_6)$ alkyl)-NI- $((C_1-C_6)$ alkyl)-NI-, phenyl-((C=O)-NH-, $((C_1-C_6)$ alkyl)-NI-, $((C_1$

From-

 (C_1-C_6) alkyl-N]-, phenyl-HN-(C=O)-NH-, (phenyl)₂N-(C=O)-NH-, phenyl-HN-(C=O)-[((C₁-C₆)alkyl-N]- C_6)alkyl)-N]-, $(phenyl-)_2N-(C=O)-[((C_1-C_6)alkyl)-N]-, (C_1-C_6)alkyl-O-(C=O)-NH-,$ $(C_1-C_6)alkyl-O-(C=O)-[((C_1-C_6)alkyl)-N]-, phenyl-O-(C=O)-NH-,$ phenyl-O-(C=O)-[(alkyl)-N]-, (C₁-C₆)alkyl-SO₂NH-, phenyl-SO₂NH-, (C₁-C₆)alkyl-SO₂-, phenyl- SO_2 -, hydroxy, (C_1-C_6) alkoxy, perhalo (C_1-C_6) alkoxy, phenoxy, (C_1-C_6) alkyl-(C=O)-O-, (C_1-C_6) ester- (C_1-C_6) alkyl-O-, phenyl-(C=O)-O-, $H_2N-(C=O)$ -O-, (C_1-C_6) alkyl-HN-(C=O)-O-, $((C_1-C_6)alkyl)_2N-(C=O)-O-$, phenyl-HN-(C=O)-O-, and (phenyl)_2N-(C=O)-O-; wherein R¹ can optionally be further independently substituted with at least one moiety independently selected from the group consisting of: carbonyl, halo, halo(C₁-C₆)alkyl, perhalo(C₁-C₆)alkyl, perhalo(C₁-C₆)alkoxy, (C₁-C₆)alkyl, (C₂-C₆)alkenyl, (C₂-C₆)alkynyl, hydroxy, oxo, mercapto, (C₁-C₆)alkylthio, (C₁-C₆)alkoxy, (C₅-C₁₀)aryl or (C₅-C₁₀)heteroaryl, (C₅- C_{10})aryloxy or (C_5-C_{10}) heteroaryloxy, (C_5-C_{10}) ar (C_1-C_6) alkyl or (C_5-C_{10}) heteroar (C_1-C_6) alkyl, (C_5-C_{10}) C_{10})ar(C_1 - C_6)alkoxy or (C_5 - C_{10})heteroar(C_1 - C_6)alkoxy, HO-(C=O)-, ester, amido, ether, amino, amino(C₁-C₆)alkyl, (C₁-C₆)alkylamino(C₁-C₆)alkyl, di(C₁-C₆)alkylamino(C₁-C₆)alkyl, (C₅- C_{10})heterocyclyl(C_1 - C_6)alkyl, (C_1 - C_6)alkyl- and di(C_1 - C_6)alkylamino, cyano, nitro, carbamoyl, (C_1-C_6) alkylcarbonyl, (C_1-C_6) alkoxycarbonyl, (C_1-C_6) alkylaminocarbonyl, di(C₁-C₆)alkylaminocarbonyl, (C₅-C₁₀)arylcarbonyl, (C₅-C₁₀)aryloxycarbonyl, (C_1-C_6) alkylsulfonyl, and (C_5-C_{10}) arylsulfonyl;

each \mathbb{R}^3 is independently selected from the group consisting of: hydrogen, halo, halo(\mathbb{C}_1 - \mathbb{C}_6)alkyl, (\mathbb{C}_1 - \mathbb{C}_6)alkyl, (\mathbb{C}_2 - \mathbb{C}_6)alkenyl, (\mathbb{C}_2 - \mathbb{C}_6)alkynyl, perhalo(\mathbb{C}_1 - \mathbb{C}_6)alkyl, phenyl, (\mathbb{C}_5 - \mathbb{C}_{10})heteroaryl, (\mathbb{C}_5 - \mathbb{C}_{10})heteroaryl- \mathbb{C}_6 , (\mathbb{C}_3 - \mathbb{C}_{10})heteroaryl- \mathbb{C}_7 , (\mathbb{C}_7 - \mathbb{C}_7)heterocyclic- \mathbb{C}_7 , (\mathbb{C}_7 - \mathbb{C}_7)cycloalkyl- \mathbb{C}_7 , (\mathbb{C}_7 - \mathbb{C}_7)heterocyclic- \mathbb{C}_7 , (\mathbb{C}_7 - \mathbb{C}_7)cycloalkyl- \mathbb{C}_7 , (\mathbb{C}_7 - \mathbb{C}_7)alkyl- \mathbb{C}_7 , (\mathbb{C}_7 - \mathbb{C}_7)heterocyclic- \mathbb{C}_7 , \mathbb{C}_7 - \mathbb{C}

From-

phenyl-NH-(C=O)-, phenyl-[((C₁-C₆)alkyl)-N]-(C=O)-, (C₅-C₁₀)heteroaryl-NH-(C=O)-, (C₅-C₁₀)heterocyclic-NH-(C=O)-, (C₃-C₁₀)cycloalkyl-NH-(C=O)- and (C₁-C₆)alkyl-(C=O)-O-;

where alkyl, alkenyl, alkynyl, phenyl, heteroaryl, heterocyclic, cycloalkyl, alkoxy, phenoxy, amino of \mathbb{R}^3 is optionally substituted by at least one substituent independently selected from (C_1-C_6) alkyl, (C_1-C_6) alkoxy, halo (C_1-C_6) alkyl, halo, H_2N- , $Ph(CH_2)_{1-6}HN-$, and (C_1-C_6) alkylHN-;

s is an integer from one to five;

R⁴ is independently selected from the group consisting of: hydrogen, halo, halo(C₁-C₆)alkyl, (C₁-C₆)alkyl, (C₂-C₆)alkenyl, (C₂-C₆)alkynyl, perhalo(C₁-C₆)alkyl, phenyl, (C₅-C₁₀)heteroaryl, (C₅-C₁₀)heterocyclic, (C₃-C₁₀)cycloalkyl, hydroxy, (C₁-C₆)alkoxy, perhalo(C₁-C₆)alkoxy, phenoxy, (C₅-C₁₀)heteroaryl-O-, (C₅-C₁₀)heterocyclic-O-, (C₃-C₁₀)cycloalkyl-O-, (C₁-C₆)alkyl-S-, (C₁-C₆)alkyl-SO₂-, (C₁-C₆)alkyl-NH-SO₂-, O₂N-, NC-, amino, Ph(CH₂)₁₋₆HN-, (C₁-C₆)alkylHN-, (C₁-C₆)alkylamino, [(C₁-C₆)alkyl]₂-amino, (C₁-C₆)alkyl-SO₂-NH-, amino(C=O)-, aminoO₂S-, (C₁-C₆)alkyl-(C=O)-NH-, (C₁-C₆)alkyl-(C=O)-((C₁-C₆)alkyl)-N-, phenyl-(C=O)-NH-, phenyl-(C=O)-((C₁-C₆)alkyl)-N]-, (C₁-C₆)alkyl-(C=O)-, phenyl-(C=O)-, (C₅-C₁₀)heteroaryl-(C=O)-, (C₅-C₁₀)heterocyclic-(C=O)-, (C₃-C₁₀)cycloalkyl-(C=O)-, HO-(C=O)-, (C₁-C₆)alkyl-O-(C=O)-, H₂N(C=O)-, (C₁-C₆)alkyl-NH-(C=O)-, ((C₁-C₆)alkyl)-NI-(C=O)-, (C₅-C₁₀)heterocyclic-NH-(C=O)-, (C₃-C₁₀)cycloalkyl-NH-(C=O)- and (C₁-C₆)alkyl-(C=O)-O-;

where alkyl, alkenyl, alkynyl, phenyl, heteroaryl, heterocyclic, cycloalkyl, alkoxy, phenoxy, amino of R^4 is optionally substituted by at least one substituent independently selected from the group consisting of (C_1-C_6) alkyl, (C_1-C_6) alkoxy, halo (C_1-C_6) alkyl, halo, H_2N_7 , $Ph(CH_2)_{1.6}HN_7$, (C_1-C_6) alkyl HN_7 , (C_5-C_{10}) heteroaryl and (C_5-C_{10}) heterocyclyl;

with the proviso that when R⁴ is a substituted phenyl moiety, then (a) R¹ is not naphthyl, phenyl or anthracenyl and (b) if R¹ is a phenyl fused with an aromatic or non-aromatic cyclic ring of 5-7 members wherein said cyclic ring optionally contains up to three heteroatoms independently selected from N, O and S, then the fused cyclic ring of said R¹ moiety is substituted.

17. (new) A compound of formula (Ib):

$$R^1$$
 R^4
 (Ib)

or a pharmaceutically acceptable salt, hydrate, tautomer or solvate thereof, wherein:

X is S;

R¹ is selected from the group consisting of

From-

where R^{2a} is independently selected from the group consisting of: (C₁-C₆)alkyl, (C₂-C₆)alkynyl, (C₃-C₁₀)cycloalkyl, (C₅-C₁₀)aryl, (C₁-C₆)alkylaryl, amino, carbonyl, carboxyl, (C₅-C₁₀)heteroaryl, (C₅-C₁₀)heterocyclyl, (C₁-C₆)alkoxy, nitro, halo, hydroxyl, (C₁-C₆)alkoxy(C₁-C₆)ester, and where alkyl, alkenyl, alkynyl, cycloalkyl, aryl, amino, heteroaryl, heterocyclyl, and alkoxy of R^{2a} is optionally substituted by at least one moiety independently selected from the group consisting of halo, (C₁-C₆)alkyl, (C₂-C₆)alkenyl, (C₂-C₆)alkynyl, perhalo(C₁-C₆)alkyl, phenyl, (C₃-C₁₀)cycloalkyl, (C₅-C₁₀)heteroaryl, (C₅-C₁₀)heterocyclic, formyl, NC-, (C₁-C₆)alkyl-(C=O)-, phenyl-(C=O)-, HO-(C=O)-, (C₁-C₆)alkyl-O-(C=O)-, (C₁-C₆)alkyl-NH-(C=O)-, ((C₁-C₆)alkyl)₂-N-(C=O)-, phenyl-NH-(C=O)-, phenyl-[((C₁-C₆)alkyl)-N]-(C=O)-, amino, (C₁-C₆)alkylamino, ((C₁-C₆)alkyl)₂-amino, (C₁-C₆)alkyl-(C=O)-NH-, (C₁-C₆)alkyl-(C=O)-NH-, (C₁-C₆)alkyl-N]-, phenyl-(C=O)-NH-, ((C₁-C₆)alkyl)-N]-, h₂N-(C=O)-NH-, (C₁-C₆)alkyl-NN-(C=O)-NH-, (C₁-C₆)alkyl)₂N-(C=O)-[((C₁-C₆)alkyl)-N]-, ((C₁-C₆)alkyl)-N]-, ((C₁-C₆)alkyl)-N]-, ((C₁-C₆)alkyl)₂N-(C=O)-[((C₁-C₆)alkyl)-N]-, ((C₁-C₆)alkyl)-N]-, ((C₁-C₆

From-

 $(C_1-C_6)alkyl-N]$ -, phenyl-HN-(C=O)-NH-, (phenyl)₂N-(C=O)-NH-, phenyl-HN-(C=O)-[((C₁-C₁-C₂)alkyl-N]) C_6 alkyl)-N]-, (phenyl-)₂N-(C=O)-[((C_1 - C_6) alkyl)-N]-, (C_1 - C_6) alkyl-O-(C=O)-NH-, (C_1-C_6) alkyl-O- $(C=O)-[((C_1-C_6)$ alkyl)-N]-, phenyl-O-(C=O)-NH-, phenyl-O-(C=O)-[(alkyl)-N]-, (C₁-C₆)alkyl-SO₂NH-, phenyl-SO₂NH-, (C₁-C₆)alkyl-SO₂-, phenyl-SO₂-, hydroxy, (C₁-C₆)alkoxy, perhalo(C₁-C₆)alkoxy, phenoxy, (C₁-C₆)alkyl-(C=O)-O-, (C_1-C_6) ester- (C_1-C_6) alkyl-O-, phenyl-(C=O)-O-, $H_2N-(C=O)$ -O-, (C_1-C_6) alkyl-HN-(C=O)-O-, $((C_1-C_6)alkyl)_2N-(C=O)-O-$, phenyl-HN-(C=O)-O-, and (phenyl)_2N-(C=O)-O-; wherein R¹ can optionally be further independently substituted with at least one moiety independently selected from the group consisting of: carbonyl, halo, halo(C₁-C₆)alkyl, perhalo(C_1 - C_6)alkyl, perhalo(C_1 - C_6)alkoxy, (C_1 - C_6)alkyl, (C_2 - C_6)alkenyl, (C_2 - C_6)alkynyl, hydroxy, oxo, mercapto, (C_1-C_6) alkylthio, (C_1-C_6) alkoxy, (C_5-C_{10}) aryl or (C_5-C_{10}) heteroaryl, (C_5-C_{10}) C_{10}) aryloxy or (C_5-C_{10}) heteroaryloxy, (C_5-C_{10}) ar (C_1-C_6) alkyl or (C_5-C_{10}) heteroar (C_1-C_6) alkyl, (C_5-C_{10}) C₁₀)ar(C₁-C₆)alkoxy or (C₅-C₁₀)heteroar(C₁-C₆)alkoxy, HO-(C=O)-, ester, amido, ether, amino, amino(C₁-C₆)alkyl, (C₁-C₆)alkylamino(C₁-C₆)alkyl, di(C₁-C₆)alkylamino(C₁-C₆)alkyl, (C₅- C_{10})heterocyclyl(C_1 - C_6)alkyl, (C_1 - C_6)alkyl- and di(C_1 - C_6)alkylamino, cyano, nitro, carbamoyl, (C_1-C_6) alkylcarbonyl, (C_1-C_6) alkoxycarbonyl, (C_1-C_6) alkylaminocarbonyl, di(C₁-C₆)alkylaminocarbonyl, (C₅-C₁₀)arylcarbonyl, (C₅-C₁₀)aryloxycarbonyl, (C₁-C₆)alkylsulfonyl, and (C₅-C₁₀)arylsulfonyl;

each R^3 is independently selected from the group consisting of: hydrogen, halo, halo(C_1 - C_6)alkyl, (C_1 - C_6)alkyl, (C_2 - C_6)alkenyl, (C_2 - C_6)alkynyl, perhalo(C_1 - C_6)alkyl, phenyl, (C_5 - C_{10})heteroaryl, (C_5 - C_{10})heteroaryl- C_6 0, heteroaryl- C_6 0, heteroary

From-

phenyl-NH-(C=O)-, phenyl-[((C_1 - C_6)alkyl)-N]-(C=O)-, (C_5 - C_{10})heteroaryl-NH-(C=O)-, (C_5 - C_{10})heterocyclic-NH-(C=O)-, (C_3 - C_{10})cycloalkyl-NH-(C=O)- and (C_1 - C_6)alkyl-(C=O)-O-;

where alkyl, alkenyl, alkynyl, phenyl, heteroaryl, heterocyclic, cycloalkyl, alkoxy, phenoxy, amino of \mathbb{R}^3 is optionally substituted by at least one substituent independently selected from (C_1-C_6) alkyl, (C_1-C_6) alkoxy, halo (C_1-C_6) alkyl, halo, H_2N -, $Ph(CH_2)_{1-6}HN$ -, and (C_1-C_6) alkylHN-;

s is an integer from one to five;

 R^4 is independently selected from the group consisting of: hydrogen, halo, halo(C_1 - C_6)alkyl, (C_1 - C_6)alkyl, (C_2 - C_6)alkenyl, (C_2 - C_6)alkynyl, perhalo(C_1 - C_6)alkyl, phenyl, (C_5 - C_{10})heteroaryl, (C_5 - C_{10})heterocyclic, (C_3 - C_{10})cycloalkyl, hydroxy, (C_1 - C_6)alkoxy, perhalo(C_1 - C_6)alkoxy, phenoxy, (C_5 - C_{10})heteroaryl-O-, (C_5 - C_{10})heterocyclic-O-, (C_3 - C_{10})cycloalkyl-O-, (C_1 - C_6)alkyl-S-, (C_1 - C_6)alkyl-SO₂-, (C_1 - C_6)alkyl-NH-SO₂-, O₂N-, NC-, Ph(CH₂)₁₋₆HN-, (C_1 - C_6)alkyl-HN-, (C_1 - C_6)alkyl-Galkyl-SO₂-NH-, amino(C_2 -O)-, aminoO₂S-, (C_1 - C_6)alkyl-(C_2 -O)-NH-, (C_1 - C_6)alkyl-O)-((C_1 - C_6)alkyl-N]-, (C_1 - C_6)alkyl-(C_2 -O)-, phenyl-(C_2 -O)-, (C_5 - C_{10})heteroaryl-(C_2 -O)-, (C_5 - C_{10})heterocyclic-(C_2 -O)-, (C_3 - C_1 0)cycloalkyl-(C_2 -O)-, HO-(C_2 -O)-, (C_1 - C_6)alkyl-NH-(C_3 -O)-, ((C_1 - C_6)alkyl-NH-(C_3 -O)-, ((C_1 - C_6)alkyl-NH-(C_3 -O)-, ((C_3 - C_1 0)heteroaryl-NH-(C_3 -O)-, (C_3 - C_1 0)cycloalkyl-NH-(C_3 -O)-, (C_5 - C_1 0)heteroaryl-NH-(C_3 -O)-, (C_5 - C_1 0)cycloalkyl-NH-(C_3 -O)-, (C_5 - C_1 0)heteroaryl-NH-(C_3 -O)-, (C_5 - C_1 0)heteroaryl-NH-(C_3 -O)-, (C_5 - C_1 0)cycloalkyl-NH-(C_3 -O)-, (C_5 - C_1 0)heteroaryl-NH-(C_3 -O)-, (C_5 - C_1 0)cycloalkyl-NH-(C_3 -O)-, (C_5 - C_1 0)heteroaryl-NH-(C_3 -O)-, (C_5 - C_1 0)cycloalkyl-NH-(C_3 -O)-, (C_5 - C_1 0)heteroaryl-NH-(C_3 -O)-, (C_5 - C_1 0)heteroaryl-NH-(C_3 -O)-, (C_5 - C_1 0)heteroaryl-NH-(C_3 -O)-, (C_5 - C_1 0)cycloalkyl-NH-(C_3 -O)-, and (C_1 - C_6 0)alkyl-(C_3 -O)-O-;

where alkyl, alkenyl, alkynyl, phenyl, heteroaryl, heterocyclic, cycloalkyl, alkoxy, phenoxy, amino of \mathbb{R}^4 is optionally substituted by at least one substituent independently selected from the group consisting of (C_1-C_6) alkyl, (C_1-C_6) alkoxy, halo (C_1-C_6) alkyl, halo, H_2N_- , $Ph(CH_2)_{1-6}HN_-$, (C_1-C_6) alkyl HN_- , (C_5-C_{10}) heteroaryl and (C_5-C_{10}) heterocyclyl;

with the proviso that when R⁴ is a substituted phenyl moiety, then (a) R¹ is not naphthyl, phenyl or anthracenyl and (b) if R¹ is a phenyl fused with an aromatic or non-aromatic cyclic ring of 5-7 members wherein said cyclic ring optionally contains up to three heteroatoms independently selected from N, O and S, then the fused cyclic ring of said R¹ moiety is substituted.

F-623

Appl. No. 10/667,187 Amendment dated August 10, 2006 Reply to Office Action mailed 5/10/06

From-

18. (new) A compound of formula (Ib):

$$\mathbb{R}^{1}$$
 \mathbb{R}^{4}
 \mathbb{R}^{3}
 \mathbb{R}^{3}

or a pharmaceutically acceptable salt, hydrate, tautomer or solvate thereof, wherein:

X is S;

R¹ is selected from the group consisting of

From-

where R^{2a} is independently selected from the group consisting of: (C₁-C₆)alkyl, (C₂-C₆)alkenyl, (C₂-C₆)alkynyl, (C₃-C₁₀)cycloalkyl, (C₅-C₁₀)aryl, (C₁-C₆)alkylaryl, amino, carbonyl, carboxyl, (C5-C10)heteroaryl, (C5-C10)heterocyclyl, (C1-C6)alkoxy, nitro, halo, hydroxyl, (C_1-C_6) alkoxy (C_1-C_6) ester, and where alkyl, alkenyl, alkynyl, cycloalkyl, aryl, amino, heteroaryl, heterocyclyl, and alkoxy of R^{2a} is optionally substituted by at least one moiety independently selected from the group consisting of halo, (C1-C6)alkyl, (C2-C6)alkenyl, (C2-C₆)alkynyl, perhalo(C₁-C₆)alkyl, phenyl, (C₃-C₁₀)cycloalkyl, (C₅-C₁₀)heteroaryl, (C₅-C₁₀)heterocyclic, formyl, NC-, (C₁-C₆)alkyl-(C=O)-, phenyl-(C=O)-, HO-(C=O)-, (C₁- C_6)alkyl-O-(C=O)-, (C₁-C₆)alkyl-NH-(C=O)-, ((C₁-C₆)alkyl)₂-N-(C=O)-, phenyl-NH-(C=O)-, phenyl- $[((C_1-C_6)alkyl)-N]-(C=O)-$, O_2N- , amino, $(C_1-C_6)alkylamino$, $((C_1-C_6)alkyl)_2$ -amino, $(C_1-C_6)alkyl)_2$ -ami C_6)alkyl-(C=O)-NH-, (C_1 - C_6)alkyl-(C=O)-[((C_1 - C_6)alkyl)-N]-, phenyl-(C=O)-NH-, phenyl-(C=O)-[((C₁-C₆)alkyl)-N]-, H_2N -(C=O)-NH-, (C₁-C₆)alkyl-HN-(C=O)-NH-, ((C₁-C₆)alkyl-HN-(C=O)-NH-) C_6)alkyl)₂N-(C=O)-NH-, (C_1 - C_6)alkyl-HN-(C=O)-[((C_1 - C_6)alkyl)-N]-, ((C_1 - C_6)alkyl)₂N-(C=O)-[(C_1-C_6) alkyl-N]-, phenyl-HN-(C=O)-NH-, (phenyl)₂N-(C=O)-NH-, phenyl-HN-(C=O)-[((C₁-C₆))] C_6 alkyl)-N]-, (phenyl-)₂N-(C=O)-[((C_1 - C_6) alkyl)-N]-, (C_1 - C_6) alkyl-O-(C=O)-NH-, (C_1 - C_6)alkyl-O-(C=O)-[((C_1 - C_6)alkyl)-N]-, phenyl-O-(C=O)-NH-, phenyl-O-(C=O)-[(alkyl)-N]-.

From-

(C₁-C₆)alkyl-SO₂NH-, phenyl-SO₂NH-, (C₁-C₆)alkyl-SO₂-, phenyl-SO₂-, hydroxy, (C₁-C₆)alkoxy, perhalo(C₁-C₆)alkoxy, phenoxy, (C₁-C₆)alkyl-(C=O)-O-, (C₁-C₆)ester-(C₁-C₆)alkyl-O-, phenyl-(C=O)-O-, H₂N-(C=O)-O-, (C₁-C₆)alkyl-HN-(C=O)-O-, ((C₁-C₆)alkyl)₂N-(C=O)-O-, phenyl-HN-(C=O)-O-, and (phenyl)₂N-(C=O)-O-; wherein R¹ can optionally be further independently substituted with at least one moiety independently selected from the group consisting of: carbonyl, halo, halo(C₁-C₆)alkyl, perhalo(C₁-C₆)alkoxy, (C₁-C₆)alkyl, (C₂-C₆)alkenyl, (C₂-C₆)alkynyl, hydroxy, oxo, mercapto, (C₁-C₆)alkylthio, (C₁-C₆)alkoxy, (C₃-C₁₀)aryl or (C₅-C₁₀)heteroaryl, (C₅-C₁₀)aryloxy or (C₅-C₁₀)heteroaryloxy, (C₅-C₁₀)ar(C₁-C₆)alkyl or (C₅-C₁₀)heteroar(C₁-C₆)alkyl, (C₅-C₁₀)ar(C₁-C₆)alkyl, (C₁-C₆)alkyl, di(C₁-C₆)alkylamino(C₁-C₆)alkyl, (C₅-C₁₀)heteroarylyl(C₁-C₆)alkylamino(C₁-C₆)alkylamino(C₁-C₆)alkylamino, eyano, nitro, carbamoyl, (C₁-C₆)alkylcarbonyl, (C₁-C₆)alkoxycarbonyl, (C₁-C₆)alkylaminocarbonyl, (C₁-C₆)alkylaminocarbonyl;

each R^3 is independently selected from the group consisting of: hydrogen, halo, halo(C_1 - C_6)alkyl, (C_1 - C_6)alkyl, (C_2 - C_6)alkenyl, (C_2 - C_6)alkynyl, perhalo(C_1 - C_6)alkyl, phenyl, (C_5 - C_{10})heteroaryl, (C_5 - C_{10})heteroaryl- C_7 - C_8 - C_{10})heteroaryl- C_8 - C_8 -

where alkyl, alkenyl, alkynyl, phenyl, heteroaryl, heterocyclic, cycloalkyl, alkoxy, phenoxy, amino of R³ is optionally substituted by at least one substituent independently selected

from (C₁-C₆)alkyl, (C₁-C₆)alkoxy, halo(C₁-C₆)alkyl, halo, H₂N-, Ph(CH₂)₁₋₆HN-, and (C₁-C₆)alkylHN-;

s is an integer from one to five;

R⁴ is independently selected from the group consisting of: hydrogen, halo, halo(C₁-C₆)alkyl, (C₁-C₆)alkyl, (C₂-C₆)alkenyl, (C₂-C₆)alkynyl, perhalo(C₁-C₆)alkyl, phenyl, (C₅-C₁₀)heteroaryl, (C₅-C₁₀)heterocyclic, (C₃-C₁₀)cycloalkyl, hydroxy, (C₁-C₆)alkoxy, perhalo(C₁-C₆)alkoxy, phenoxy, (C₅-C₁₀)heteroaryl-O₋, (C₅-C₁₀)heterocyclic-O₋, (C₃-C₁₀)cycloalkyl-O₋, (C₁-C₆)alkyl-S-, (C₁-C₆)alkyl-SO₂-, (C₁-C₆)alkyl-NH-SO₂-, O₂N-, NC-, amino, Ph(CH₂)₁₋₆HN-, (C₁- C_6)alkylHN-, (C_1 - C_6)alkylamino, [(C_1 - C_6)alkyl]₂-amino, (C_1 - C_6)alkyl-SO₂-NH-, amino(C=O)-, $aminoO_2S-$, $(C_1-C_6)alkyl-(C=O)-NH-$, $(C_1-C_6)alkyl-(C=O)-((C_1-C_6)alkyl)-N-$, phenyl-(C=O)-NH-, phenyl-(C=O)-((C₁-C₆)alkyl)-N]-, (C₁-C₆)alkyl-(C=O)-, phenyl-(C=O)-, (C₅-C₁₀)heteroaryl-(C=O)-, (C₅-C₁₀)heterocyclic-(C=O)-, (C₃-C₁₀)cycloalkyl-(C=O)-, HO-(C=O)-, (C₁-C₆)alkyl-O-(C=O)-, $H_2N(C=O)-$, $(C_1-C_6)alkyl-NH-(C=O)-$, $((C_1-C_6)alkyl)_2-N-(C=O)-$, phenyl-NH-(C=O)-, phenyl-((C₁-C₆)alkyl)-N]-(C=O)-, (C₅-C₁₀)heteroaryl-NH-(C=O)-, (C₅-C₁₀)heterocyclic-NH-(C=O)-, (C₃-C₁₀)cycloalkyl-NH-(C=O)- and (C₁-C₆)alkyl-(C=O)-O-;

where alkyl, alkenyl, alkynyl, phenyl, heteroaryl, heterocyclic, cycloalkyl, alkoxy, phenoxy, amino of R⁴ is optionally substituted by at least one substituent independently selected from the group consisting of (C_1-C_6) alkyl, (C_1-C_6) alkoxy, halo (C_1-C_6) alkyl, halo, H_2N_- , Ph(CH₂)₁₋₆HN-, (C₁-C₆)alkylHN-, (C₅-C₁₀)heteroaryl and (C₅-C₁₀)heterocyclyl;

with the proviso that when R⁴ is a substituted phenyl moiety, then (a) R¹ is not naphthyl, phenyl or anthracenyl and (b) if R¹ is a phenyl fused with an aromatic or non-aromatic cyclic ring of 5-7 members wherein said cyclic ring optionally contains up to three heteroatoms independently selected from N, O and S, then the fused cyclic ring of said R¹ moiety is substituted.

19. (new) A compound selected from the groups consisting of 2-(4-Benzo[1,3]dioxol-5-yl-oxazol-5-yl)-6-methyl-pyridine; 4-[5-(6-Methyl-pyridin-2-yl)-oxazol-4-yl]-quinoline; 1-Methyl-6-[5-(6-methyl-pyridin-2-yl)-oxazol-4-yl]-1H-benzotriazole;

- 2-Methyl-5-[5-(6-methyl-pyridin-2-yl)-oxazol-4-yl]-2H-benzotriazole;
- 6-[5-(6-Methyl-pyridin-2-yl)-oxazol-4-yl]-quinoline;
- 6-[5-(6-Methyl-pyridin-2-yl)-oxazol-4-yl]-quinoxaline;
- 2-[5-(6-Methyl-pyridin-2-yl)-oxazol-4-yl]-[1,5]naphthyridine;
- {4-[5-(6-Methyl-pyridin-2-yl)-oxazol-4-yl]-pyridin-2-yl}-phenyl-amine;
- 2-(4-Benzo[1,3]dioxol-5-yl-2-methyl-oxazol-5-yl)-6-methyl-pyridine;
- 1-Methyl-6-[2-methyl-5-(6-methyl-pyridin-2-yl)-oxazol-4-yl]-1H-benzotriazole;
- 2-Methyl-5-[2-methyl-5-(6-methyl-pyridin-2-yl)-oxazol-4-yl]-2H-benzotriazole;
- 6-[2-Methyl-5-(6-methyl-pyridin-2-yl)-oxazol-4-yl]-quinoline;
- 6-[2-Methyl-5-(6-methyl-pyridin-2-yl)-oxazol-4-yl]-quinoxaline;
- 2-[2-Methyl-5-(6-methyl-pyridin-2-yl)-oxazol-4-yl]-[1,5]naphthyridine;
- {4-[2-Methyl-5-(6-methyl-pyridin-2-yl)-oxazol-4-yl]-pyridin-2-yl}-phenyl-amine;
- 4-[2-Methyl-5-(6-methyl-pyridin-2-yl)-oxazol-4-yl]-quinoline;
- 4-Benzo[1,3]dioxol-5-yl-5-(6-methyl-pyridin-2-yl)-thiazol-2-ylamine;
- 4-(3-Methyl-3H-benzotriazol-5-yl)-5-(6-methyl-pyridin-2-yl)-thiazol-2-ylamine;
- 4-(2-Methyl-2H-benzotriazol-5-yl)-5-(6-methyl-pyridin-2-yl)-thiazol-2-ylamine;
- 5-(6-Methyl-pyridin-2-yl)-4-quinolin-6-yl-thiazol-2-ylamine;
- 5-(6-Methyl-pyridin-2-yl)-4-quinoxalin-6-yl-thiazol-2-ylamine;
- {4-[2-Amino-5-(6-methyl-pyridin-2-yl)-thiazol-4-yl]-pyridin-2-yl}-phenyl-amine;
- 1-Methyl-6-[5-(6-methyl-pyridin-2-yl)-thiazol-4-yl]-1H-benzotriazole;
- 2-Methyl-5-[5-(6-methyl-pyridin-2-yl)-thiazol-4-yl]-2H-benzotriazole;
- 2-(4-Benzo[1,3]dioxol-5-yl-thiazol-5-yl)-6-methyl-pyridine;
- 6-[5-(6-Methyl-pyridin-2-yl)-thiazol-4-yl]-quinoxaline;
- 2-[5-(6-Methyl-pyridin-2-yl)-thiazol-4-yl]-[1,5]naphthyridine;
- {4-[5-(6-Methyl-pyridin-2-yl)-thiazol-4-yl]-pyridin-2-yl}-phenyl-amine;
- 4-[5-(6-Methyl-pyridin-2-yl)-thiazol-4-yl]-quinoline;
- 6-[5-(6-Methyl-pyridin-2-yl)-thiazol-4-yl]-quinoline;
- 1-Methyl-6-[2-methyl-5-(6-methyl-pyridin-2-yl)-thiazol-4-yl]-1H-benzotriazole;
- 2-Methyl-5-[2-methyl-5-(6-methyl-pyridin-2-yl)-thiazol-4-yl]-2H-benzotriazole;

- 2-(4-Benzo[1,3]dioxol-5-yl-2-methyl-thiazol-5-yl)-6-methyl-pyridine;
- 6-[2-methyl-5-(6-Methyl-pyridin-2-yl)-thiazol-4-yl]-quinoxaline;
- 2-[2-methyl-5-(6-Methyl-pyridin-2-yl)-thiazol-4-yl]-[1,5]naphthyridine;
- {4-[2-methyl-5-(6-Methyl-pyridin-2-yl)-thiazol-4-yl]-pyridin-2-yl}-phenyl-amine;
- 4-[2-methyl-5-(6-Methyl-pyridin-2-yl)-thiazol-4-yl]-quinoline; and
- 6-[2-methyl-5-(6-Methyl-pyridin-2-yl)-thiazol-4-yl]-quinoline; or a pharmaceutically acceptable salt thereof.
- 20. (new) A compound selected from the groups consisting of
 - 2-(5-Benzo[1,3]dioxol-5-yl-oxazol-4-yl)-6-methyl-pyridine;
 - 2-(5-Benzo[1,3]dioxol-5-yl-oxazol-4-yl)-pyridine;
 - 2-(5-Benzo[1,3]dioxol-5-yl-oxazol-4-yl)-6-methoxy-pyridine;
 - 2-(5-Benzo[1,3]dioxol-5-yl-oxazol-4-yl)-6-trifluoromethyl-pyridine;
 - 2-Methyl-5-[4-(6-methyl-pyridin-2-yl)-oxazol-5-yl]-2H-benzotriazole;
 - 4-[4-(6-Methyl-pyridin-2-yl)-oxazol-5-yl]-quinoline;
 - 1-Methyl-6-[4-(6-methyl-pyridin-2-yl)-oxazol-5-yl]-1H-benzotriazole;
 - 6-(4-Pyridin-2-yl-oxazol-5-yl)-quinoxaline;
 - 6-[4-(6-Methyl-pyridin-2-yl)-oxazol-5-yl]-quinoxaline;
 - 6-[4-(6-Methyl-pyridin-2-yl)-oxazol-5-yl]-quinoline;
 - 6-(4-pyridin-2-yl-oxazol-5-yl)-quinoline;
 - 2-(5-Benzo[1,3]dioxol-5-yl-oxazol-4-yl)-6-ethyl-pyridine;
 - 2-(5-Benzo[1,3]dioxol-5-yl-oxazol-4-yl)-6-propyl-pyridine;
 - 6-[4-(6-Methyl-pyridin-2-yl)-oxazol-5-yl]-benzothiazole;
 - 6-[2-Methyl-4-(6-methyl-pyridin-2-yl)-oxazol-5-yl]-quinoline;
 - 1-Methyl-6-[2-methyl-4-(6-methyl-pyridin-2-yl)-oxazol-5-yl]-1H-benzotriazole;
 - 2-Methyl-5-[2-methyl-4-(6-methyl-pyridin-2-yl)-oxazol-5-yl]-2H-benzotriazole;
 - 2-(5-Benzo[1,3]dioxol-5-yl-2-methyl-oxazol-4-yl)-6-methyl-pyridine;
 - 6-[2-Methyl-4-(6-methyl-pyridin-2-yl)-oxazol-5-yl]-quinoxaline;
 - 2-[2-Methyl-4-(6-methyl-pyridin-2-yl)-oxazol-5-yl]-[1,5]naphthyridine;

From-

{4-[2-Methyl-4-(6-methyl-pyridin-2-yl)-oxazol-5-yl]-pyridin-2-yl}-phenyl-amine; and 4-[2-Methyl-4-(6-methyl-pyridin-2-yl)-oxazol-5-yl]-quinoline; or a pharmaceutically acceptable salt thereof.

- 21. (new) A compound selected from the groups consisting of
 - 1-Methyl-6-[4-(6-methyl-pyridin-2-yl)-thiazol-5-yl]-1H-benzotriazole;
 - 2-Methyl-5-[4-(6-methyl-pyridin-2-yl)-thiazol-5-yl]-2H-benzotriazole;
 - 2-(5-Benzo[1,3]dioxol-5-yl-thiazol-4-yl)-6-methyl-pyridine;
 - 6-[4-(6-Methyl-pyridin-2-yl)-thiazol-5-yl]-quinoxaline;
 - 2-[4-(6-Methyl-pyridin-2-yl)-thiazol-5-yl]-[1,5]naphthyridine;
 - {4-[4-(6-Methyl-pyridin-2-yl)-thiazol-5-yl]-pyridin-2-yl}-phenyl-amine;
 - 4-[4-(6-Methyl-pyridin-2-yl)-thiazol-5-yl]-quinoline;
 - 6-[4-(6-Methyl-pyridin-2-yl)-thiazol-5-yl]-quinoline;
 - 1-Methyl-6-[2-methyl-4-(6-methyl-pyridin-2-yl)-thiazol-5-yl]-1H-benzotriazole;
 - 2-Methyl-5-[2-methyl-4-(6-methyl-pyridin-2-yl)-thiazol-5-yl]-2H-benzotriazole;
 - 2-(5-Benzo[1,3]dioxol-5-yl-2-methyl-thiazol-4-yl)-6-methyl-pyridine;
 - 6-[2-methyl-4-(6-Methyl-pyridin-2-yl)-thiazol-5-yl]-quinoxaline;
 - 2-[2-methyl-4-(6-Methyl-pyridin-2-yl)-thiazol-5-yl]-[1,5]naphthyridine;
 - {4-[2-methyl-4-(6-Methyl-pyridin-2-yl)-thiazol-5-yl]-pyridin-2-yl}-phenyl-amine;
 - 4-[2-methyl-4-(6-Methyl-pyridin-2-yl)-thiazol-5-yl]-quinoline; and
- 6-[2-methyl-4-(6-Methyl-pyridin-2-yl)-thiazol-5-yl]-quinoline; or a pharmaceutically acceptable salt thereof.
- 22. (new) A compound selected from the groups consisting of
 - 5-(3-Methyl-3H-benzotriazol-5-yl)-4-(6-methyl-pyridin-2-yl)-thiazol-2-ylamine;
 - 5-(2-Methyl-2H-benzotriazol-5-yl)-4-(6-methyl-pyridin-2-yl)-thiazol-2-ylamine;
 - 5-Benzo[1,3]dioxol-5-yl-4-(6-methyl-pyridin-2-yl)-thiazol-2-ylamine; and
- 4-(6-Methyl-pyridin-2-yl)-5-quinoxalin-6-yl-thiazol-2-ylamine; or a pharmaceutically acceptable salt thereof.